

Fremont's Generation

- Baseload Power Plants
 - Lon D Wright coal-fired generating station
 - Unit #6 16.5 MW
 - Unit #7 − 21 MW
 - Unit #8 91.5 MW
 - Derril G Marshall Generating Station gas-fired
 - 41.6 MW of peaking power
- Grid Power
 - Southwest Power Pool (SPP) Market-based rates
 - 60MW limit
- Renewable
 - Cottonwood Wind Farm 40 MW (November 2017)
 - Community Solar 1.55 MW





Department of Energy Solar Program Technical Assistance Grant

- Why ask for help?
- Request:
 - Look at various pricing models
 - Municipal-owned
 - Customer-owned
 - Power Purchase Agreement
 - Tax credits
 - Investment/production tax credit
 - Customer survey
 - Listen to customers
 - Educate







Community Solar Survey Results

- 70% interested in community solar
- Most appealing aspects of community solar:

Reduces dependence on fossil fuels (61%)

Good for the environment (57%)

| Potential to provide subscribers financial benefits (52%)

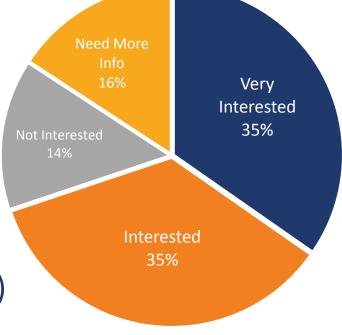
|Doesn't require a rooftop (29%)

|Employment for local worker (27%)

|No maintenance and minimal upfront costs (22%)

|Located within the community (15%)

| Uses new solar technology (11%)



Customers Interested in Community Solar





Community Solar Survey Results

Most important reason to join solar farm?

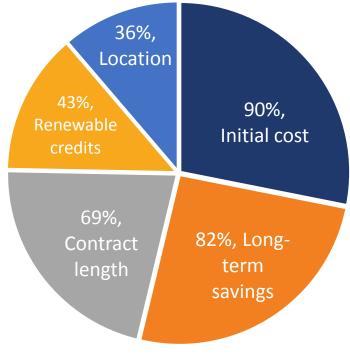
|Initial cost (90%)

Long-term savings (82%)

|Contract length (69%)

|Who owns Renewable Energy Credits (43%)

|Location of solar farm (36%)



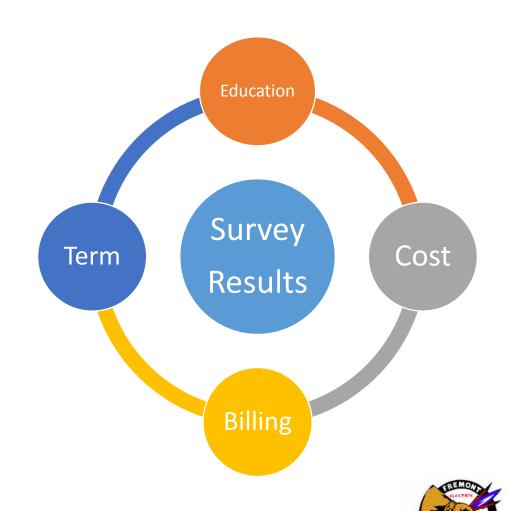
Most Important Reason for Solar





Community Solar Survey Results

- Education, education
 - 35% do not understand community solar
- Payment
 - Survey respondents are price sensitive
- Billing
 - Virtual net metering
 - Fixed blocks of solar energy
- Length of term
 - Minimum, but as short as possible





Solar Program Parameters

- Eligibility: Available to all customers of Fremont, subject to a signed agreement (2 pages)
- <u>Participation:</u> Two options:
 - Purchase panel(s) \$180 ea.
 - 1 panel yields 43 kWh/month
 - Purchase Solar Energy Shares \$.06/kWh
 - 1 share equals 150 kWh/month

Minimum: 1 panel/solar energy share

Maximum: 50-80% of annual kWh consumption

(Residential 80%/Commercial 50%)

- Program Length: 1-month residential; 1-year commercial
- Enrollment Fee: \$30 refundable (applied to bill) after 1-year
- Portability: Participation is transferrable





Cost of Community Solar – Residential

(Residential Bill of 1000 kWh with & without Solar Energy)

Residential - Purchase 2 Solar Energy Shares to Achieve a 30% Renewable Energy Mix

	Without Solar					With Solar			
Summer (Jun-Sept)	<u>kWh</u>	Rate		<u>Amount</u>	_	<u>kWh</u>	Rate		<u>Amount</u>
Customer Charge			\$	14.00				\$	14.00
Energy Charge Summer	1,000	\$ 0.1096	\$	109.60		1,000 \$	\$ 0.1096	\$	109.60
Solar Energy Charge						300	\$ 0.0600) \$	18.00
Base Energy Credit						300	\$ (0.0544)	* \$	(16.32)
Total Monthly Bill (Summer)			\$	123.60	=			<u>\$</u>	125.28
Difference								\$	1.68

^{*} Subject to change annually as the cost of conventional (coal-fired) power changes.





Cost of Community Solar – Residential

(Residential Bill of 1000 kWh with & without Solar Energy)

Residential - Purchase 7 Solar Panels (\$1,260) to Achieve a 31% Renewable Energy Mix

	Without Solar					With Solar			
Summer (Jun-Sept)	<u>kWh</u>	Rate	:	<u>Amount</u>	_	<u>kWh</u>	<u>Rate</u>	<u>/</u>	<u>Amount</u>
Customer Charge			\$	14.00				\$	14.00
Energy Charge Summer	1,000	\$ 0.1096	\$	109.60		1,000	\$ 0.1096	\$	109.60
Solar Energy Charge						0	\$ 0.0600	\$	-
Base Energy Credit						301	\$ (0.0544)	* \$	(16.37)
Solar Maintenance Charge						301	\$ 0.0277	7 \$	8.34
Total Monthly Bill (Summer)			\$	123.60	=			\$	115.56
Difference								\$	(8.04)

Approximate Payback (years) after Federal Tax Credit

^{*} Subject to change annually as the cost of conventional (coal-fired) power changes.





Fremont Community Solar Farm Results

- Sold out 1.0 MW in 5 weeks
- Sold out 1.55 MW in 7 weeks
- 180 Residential customers subscribed
 - 50% purchased solar panels
 - 50% signed up for solar energy shares
- 20 Commercial customers subscribed
- Commercial operation January
- 70+ names on waiting list for Solar Farm 2



